

FOR OFFICIAL USE ONLY

JPRS L/9476

12 January 1981

USSR Report

ECONOMIC AFFAIRS

(FOUO 1/81)



FOREIGN BROADCAST INFORMATION SERVICE

FOR OFFICIAL USE ONLY

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

COPYRIGHT LAWS AND REGULATIONS GOVERNING OWNERSHIP OF
MATERIALS REPRODUCED HEREIN REQUIRE THAT DISSEMINATION
OF THIS PUBLICATION BE RESTRICTED FOR OFFICIAL USE ONLY.

FOR OFFICIAL USE ONLY

JPRS L/9476

12 January 1981

USSR REPORT
ECONOMIC AFFAIRS
(FOUO 1/81)

CONTENTS

REGIONAL DEVELOPMENT

| | |
|--|----|
| Need for Republic Regional Planning Coordination Stressed (N. Santeladze; VOPROSY EKONOMIKI, Sep 80) | 1 |
| Report on Projected Development of Ural Region (VESTNIK AKADEMII NAUK SSSR, Oct 80) | 9 |
| Marchuk Elaborates on Development of Productive Forces of Siberia (G. I. Marchuk; VESTNIK AKADEMII NAUK SSSR, Oct 80) | 22 |

- a -

[III - USSR - 3 FOUO]

FOR OFFICIAL USE ONLY

REGIONAL DEVELOPMENT

NEED FOR REPUBLIC REGIONAL PLANNING COORDINATION STRESSED

Moscow VOPROSY EKONOMIKI in Russian No 9, Sep 80 pp 32-39

[Article by N. Santeladze: "Production Efficiency in the Region"]

[Text] In the age of developed socialism when the country's economic potential has reached a high level, there has been a considerable increase in the number of objects of control, inter- and intraregional economic ties have become more complex, and new tasks have arisen in connection with accelerating comprehensive socioeconomic development of individual regions and increasing the efficiency of their economies. All this is accompanied by greater requirements for high quality of planned management of the regions' economies.

If one wishes to ensure the all-around economic and social development of the regions, efficient utilization of their natural and labor resources and efficient functioning of the entire territorial economy, it is not enough to be guided only by plans of individual branches and enterprises that are located on a given territory. These plans are frequently not coordinated among themselves, which impedes increasing the efficiency of public production. It is necessary to strengthen the comprehensive approach toward the economy on the basis of optimal coordination of branch and territorial principles of planning. Here the socioeconomic strategy for the development of the territorial economy must proceed from general state interests and be based on the most important principle of the program-target approach -- unity and mutual coordination of goals and resources. Improvement of the style, methods and forms of administration and planning of the regions should contribute to comprehensive development and increased efficiency of their economies and, in the final analysis, to the equalization of the remaining territorial differences in the development and efficiency of the economy, the incomes of the population, the level and structure of consumption, and the support of the social and domestic infrastructure.

One should consider the main tasks related to controlling production efficiency in the regions to be: commensurability of production expenditures and results related to the economic activity of the region; disclosure and substantiation of factors and reserves for growth; preparation and implementation of strategic administrative and planning decisions regarding questions of increasing the efficiency of management, in the same way as is done for any national economic problems in regional development. Production efficiency should be measured, analyzed, planned and strictly controlled not only on the scale of the republic and its individual branches and subbranches, associations and enterprises (along the "vertical"), but also in terms of the corresponding intrarepublic regions and their subregions (along the "horizontal").

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

Thus calculations of production efficiency (accounting, analysis, planning and control) should be made not only in the main units of territorial planning, the union republics, but also in the autonomous republics, oblasts, cities and rayons. The inclusion of intrarepublic economic rayons in the sphere of territorial planning, and the measurement and substantiation of production efficiency here should become a constituent part of planning and economic management on the level of administration as well. At the same time it is necessary to strengthen the time between consolidated national economic calculations of efficiency at the level of the union republic and calculations of efficiency for individual intrarepublic regions.

The strengthening of the role of regional indicators of efficiency in administration of the economy depends largely on improvement of territorial planning. The economic rayons of the Georgian SSR, like those of a number of other union republics, have not yet become objects of comprehensive territorial planning and regional peculiarities are not adequately taken into account in economic management. The study of interr rayon differences which is necessary for comparing the degrees of development and, consequently, for justifying planning decisions for equalizing the levels of development of large intrarepublic regions, is still in the stage of preplanning scientific research.

The comprehensive plans for the development of the economies of the autonomous republics, rayons and cities of the republic do not have a section devoted to planning an increase in the economic efficiency of production as a whole on the territories of the corresponding regions. The total efficiency of the processes of regional growth in terms of intrarepublic territorial units is practically not evaluated and not substantiated. This impedes a comprehensive system-target approach to solving national economic territorial problems as well as the disclosure and utilization of intraregional reserves for increasing efficiency.

Small intrarepublic regions frequently have considerable economic potential and therefore they play an important role in the formation of the general republic efficiency. Thus the proportion of the Adzharskaya ASSR in the Georgian economy amounts to: in the gross social output -- 7.1 percent, including in industry -- 6.8 percent, agriculture -- 7.6 percent, transportation and communications -- 20.3 percent; in the national income -- 7.6 percent, including in industry -- 6.9 percent, agriculture -- 8.7 percent, and transportation and communications -- 16.6 percent. On the whole the Adzharskaya and Abkhazskaya autonomous republics and the Yugo-Osetinskaya Autonomous Oblast produce more than 16 percent of the global social product and 18 percent of the national income of the Georgian SSR. Concentrated in these regions are more than 19 percent of the labor resources, 17.9 percent of the fixed production capital and 13.9 percent of the fixed industrial capital. The Central-Eastern (Tbilisskiy) Economic Region produces more than 44 percent of the global social product and 40 percent of the national income of the republic.

Control of efficiency in the regional aspect should include: the establishment of the corresponding consolidated and individual parameters of efficiency, their comprehensive analysis and evaluation, the substantiation of the dynamics and systematic control over the change in these indicators, and the disclosure of shortcomings, "bottlenecks," and undesirable tendencies in the dynamics of efficiency with a determination of the factors that caused them.

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

One of the reasons for arrears in the general economic and industrial development of a number of regions is the underestimation of these requirements. Thus the Southern Economic Region of Georgia, despite its great potential capabilities and high rates of economic growth, is considerably below the level of general economic and industrial development of the central industrial regions and also the average republic level. The gross social output and national income produced there (per one individual employed in material production) is one-half and five-eighths, respectively, of the average level for the republic. In the Yugo-Osetinskaya Autonomous Oblast the same indicators referring to analogous average republic parameters amount to 59.1 percent and 71.5 percent, respectively. In these regions the per-capita output of the gross industrial product amounts to one-sixth and one-half, respectively, of the average level for Georgia, even though their natural and economic conditions are favorable for industrial development. Only 68.8 percent of the available labor resources are employed in the public economy of the Southern Economic Region, and 74.3 percent are in Yugo-Osetiya. This explains the low level of their industrial development to a considerable degree.

The interests of comprehensive development of the republic economy and increased efficiency of public production require acceleration of the process of economic and socio-cultural development of presently lagging regions and their subregions and also oblasts in mountain areas. Maximum enlistment of their natural, economic and labor resources into economic circulation would not only contribute to progressive qualitative changes in the economy and a rise in the level of socioeconomic development, but to an increase in their contribution to the total economic potential of Georgia as well as to increased efficiency in the functioning of the general republic economy.

An important practical task is to develop a methodology for comprehensive territorial planning and to determine criteria and a system of indicators that characterize the level and dynamics of production efficiency in intrarepublic regions of various ranks. This work is being done at the present time in a number of economic scientific research institutes of the country, including the Scientific Research Institute of Economic Planning under the Georgian SSR Gosplan. It is necessary for the corresponding agencies (above all the USSR Gosplan and the gosplans of the union republics) to display more initiative and activity in taking concrete measures for practical introduction of a system of comprehensive territorial planning.

It is also necessary to broaden the initial information and statistics base, especially its territorial aspect, and the group of indicators that characterize the dynamics of the consolidated and branch parameters of the technical and economic level and production efficiency in all intrarepublic regions. It is now possible locally to arrange accounting and analysis of individual indicators of efficiency (labor productivity, capital-output ration, profit, profitability and so forth) in the corresponding regions and to establish control over their dynamics.

Indicators of efficiency must be used as initial information, and after a mechanism for comprehensive territorial planning has been arranged they can be used in the form of planning and economic material when preparing decisions regarding all basic problems of planning and economic management. In particular, they are necessary for substantiating comprehensive target programs for the economic and social development of individual regions, determining the directions and concrete ways of

FOR OFFICIAL USE ONLY

streamlining the existing structure of the regional economy, revealing conditions and reserves for increasing the efficiency of the utilization of regional factors and resources for economic growth, and so forth. On the basis of consolidated national economic indicators of efficiency and calculations of their level and dynamics, one should evaluate various variants of the comprehensive territorial plan of the regions and select planning decisions which are the most efficient and acceptable from the standpoint of national economic indicators. Calculation indicators of efficiency on the scale of a given territorial unit should also be used when evaluating and intercoordinating proposals of individual associations, ministries and departments for the development of enterprises and industries under their jurisdiction that are located on the territory of the region.

Inadequate accounting for the indicators of regional efficiency and inadequate coordination of the interests of the branch and the region have a negative effect above all on the national economic efficiency of the functioning of the territorial economy as a whole or individual units of it.

Thus a plant for metal structures was constructed in the Rustavi industrial center in Georgia. The profile of this enterprise (the manufacture of welded steel construction elements for the main components of blast furnace, open-hearth furnace, rolling and mixing shops, hoppers, large-diameter pipe lines and so forth) cannot be considered justified from the national economic standpoint. Obtaining almost all its metal from other plants of the country, particularly those located in the Urals and Central Asia, the Rustavi plant for metal structures also ships no less heavy cargoes over long distances, including in opposite directions (in 1979 -- up to 80 percent). When the plant reaches its planned capacity the shipment of large-tonnage cargoes in opposite directions (metal and metal structures) will be constantly increasing since the demand of the republic itself for these products is not great. There will be a corresponding increase in the economic detriment caused by inefficient functioning of this enterprise. Since the possibilities of providing labor resources were not taken into account when the plant was being constructed, it is now experiencing a shortage of them.

The lack of a permanent products list, the large number of various orders during the course of the year, the existence of a multitude of types and sizes of rolled metal, and the low repetition rate of the output of structures give rise to additional difficulties in its operation. From 1969 through 1978 the plant failed to fulfill state planning assignments in the most important indicators of efficiency and quality of operation -- labor productivity, production costs, profit and profitability of production. In 1975-1978 alone the overall sum of losses sustained by the plant amounted to about 2 million rubles. In 1970-1974 the coefficient of utilization of its production capacity was 24.8-50 percent, in 1975 and 1976 -- 38.6-42.6 percent, respectively, and since 1978 -- 60 percent. At the present time there is the critical issue of giving the plant a different profile that is more expedient, taking into account its orientation toward the output of less metal-intensive products for the needs of the republic's economy.

If the planning agencies had correctly evaluated the possible national economic and regional efficiency of the functioning of a plant of this profile, the analysis of regional peculiarities, conditions and factors effective in the Rustavi industrial complex would have shown that this enterprise should have been adapted mainly to the needs of the economy of the republic and nearby regions. Moreover,

FOR OFFICIAL USE ONLY

taking into account the extreme tautness of the balance of labor resources in the Rustavi region, the construction of another enterprise there would be inexpedient from this standpoint as well.

It is possible to give other examples in which the production capacities of enterprises of individual branches are increased without the required coordination with the existing natural and labor resources of the region and also with the specialization of the rayon. Many enterprises located in the suburbs of Tbilisi do not fully utilize their production capacities because when an industrial center was created here through the efforts of various union and republic ministries and departments, they did not properly take into account the interests of the economy of the region as a whole. The corresponding ministries and departments did not promptly see to the allotment of funds for the development of objects of the social and domestic infrastructure, and therefore the enterprises of the center ended up without the necessary labor resources.

Regional indicators of efficiency should be widely taken into account when summing up the results of socialist competition among autonomous republics, oblasts, cities and rayons, and also when organizing counterplanning at the level of individual regions, when comprehensively evaluating the quality of their management, when substantiating the degree of tautness of territorial plans, and so forth. On the whole, calculations regarding regional efficiency should become an important means of actively influencing the processes of socioeconomic development of intrarepublic regions.

In this connection it will be necessary to improve the quality of analytical work at all levels of territorial administration and to study the achieved level and dynamics of the efficiency of production as well as the main factors and conditions for increasing it. In the autonomous republics and oblasts, and also in other intrarepublic rayons it is necessary to make calculations of efficiency at the following levels: for individual enterprises and associations; for the most important branches of the national economy and the industry of administrative rayons and large cities that are included in the corresponding autonomous formations; for the branches of the national economy and industry of the autonomous republics (oblasts); and for the national economy as a whole as a constituent part of the consolidated national economic calculations at the level of autonomous republics (oblasts) and their administrative rayons.

As we know, the methodological instructions for drawing up state plans for the development of the USSR national economy envision a unified system of indicators that augment one another for planning the increase in the efficiency of public production for individual units of the national economy. The efficiency of public production is evaluated on the basis of maximization of the increase in national income (net output) in terms of expenditures of live and embodied labor on its production or resources used in production, with an optimal correlation of the consumption and accumulation funds. At the corresponding levels of administration (the national economy as a whole, branches of material production, associations and enterprises) efficiency is used for an all-encompassing system of indicators that provide for intercoordination of local (branch) and consolidated calculations of efficiency at all levels -- from the enterprise to the national economy. On this basis it is possible to construct indicators of efficiency of the national economy in intrarepublic regions, but the number of them can be somewhat decreased and they can be changed from those used for the republic.

FOR OFFICIAL USE ONLY

It is expedient to consider one of the most important generalizing indicators of the efficiency of public production at the level of autonomous republics and oblasts to be the ratio between the volume of national income that is produced in the autonomous republic (oblast) and its amount in the union republic, which characterizes the contribution of a given region to the general republic economy. The use of this system of generalizing and particular indicators of efficiency in the management of the economy of the regions under consideration will require that we arrange the accounting and planning of their global social output and national income.

Sometimes doubts are expressed about the expediency and possibility of measuring and planning these parameters in small regions.* But it has been proven that they are not justified. Scientific institutions of the country have calculated regional quantities of the global social output and the national income, for example, for the Bashkirskaya ASSR, individual oblasts of the RSFSR, the Uzbek SSR and others. In the Georgian SSR these calculations are being made successfully not only for eight intrarepublic economic rayons, but also for all administrative units and cities of the republic.

The possibility of calculating these indicators at the level of intrarepublic regions has been demonstrated by the Scientific Research Institute of Economic Planning under the Georgian SSR Gosplan when conducting economic experiments with the participation of local planning agencies for drawing up comprehensive territorial plans for the development of the Adzharskaya ASSR and Telavskiy Rayon in the republic. In particular, the following indicators of efficiency were successfully tested in the first of these regions (for the economy as a whole and for the corresponding branches that are located on the territory of the region, regardless of their departmental jurisdiction): the production of national income (not including turnover tax or centralized deductions) per ruble of average annual fixed and circulating production capital; the relative savings of live and embodied labor in the sphere of material production -- in terms of fixed production capital, normed circulating capital, material expenditures and the wage fund; expenditures per one ruble's worth of commercial output in industry; and production outlays per one ruble's worth of gross output in agriculture.

Also utilized were indicators of the efficiency of live labor (production of national income per one individual employed in the sphere of material production, the ratio between the rates of increase in wages and labor productivity, the proportion of increase in the national income as a result of increased labor productivity), fixed capital and capital investments (capital-output ratio in industry, agriculture and construction, the cost of introducing fixed production capital per one ruble of production capital investments), and material expenditures (material expenditures per one ruble's worth of global output, not including turnover tax, and general profitability in industry and agriculture).

The planning of the economic efficiency of production in various regions should be preceded by a careful analysis of its level and dynamics during the preceding period, the disclosure of unfavorable tendencies, unsolved problems and so-called "blind-alley" problems in this area with a determination of specific factors and

* See "Planirovaniye kompleksnogo razvitiya khozyaystva oblasti, kraya, ASSR" [Planning Comprehensive Development of the Economy of the Oblast, Kray and ASSR], ed. by. N. S. Zenchenko, Izdatel'stvo "Ekonomika," 1974, p 88.

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

causes of them. Above all the indicators of the region's contribution to the creation of the republic's national income should be under the control of regional directive agencies.

Also included among the most important tasks for control of regional efficiency is the determination, on the basis of a comprehensive system-target approach, of the main directions, reserves and specific ways of further increasing efficiency, taking into account an increase in the region's contribution to the general republic economy and the implementation of comprehensive target programs for its socio-economic development. Here special attention should be devoted to remote intrarepublic reserves of a strategic nature. They include: reserves for increasing the efficiency of the intraregional structure of the national economy and its most important branches, taking into account the solution to the main regional socioeconomic problems (providing for optimal proportions in the growth of specialized and service branches of the region and increasing the level of comprehensiveness in the development of the economy); the establishment of effective intraregional production ties; an increase in the proportion of labor-intensive branches of industry in regions with a surplus of labor; the distribution of branches and shops of large industrial facilities, enterprises and institution of the social-domestic infrastructure in mountainous and foothill regions as well as small and medium-sized cities; reserves for increasing the regional efficiency of the utilization of capital investments through efficient distribution of them among new construction and expansion, reconstruction and technical rearmament of existing industries; economically substantiated "re-profiling" of existing capacities, taking into account the interests of the corresponding branch and territory, and so forth.

Additionally, one cannot underestimate the reserves for efficiency that exist in the area of technical rearmament and modernization of the region's production apparatus, full operation of existing and newly introduced fixed capital and production capacities, optimization of the structure of capital investments, further development of concentration, specialization, cooperation and combination of industry, the strictest system of economy in the utilization of labor, material and financial resources, and so forth.

Regional directive agencies, like the corresponding ministries and departments, are still not interested enough in the dynamics of the indicators of efficiency at enterprises. As usual, the main thing in their field of vision are the quantitative indicators of the economic activity of the enterprises (the fulfillment of plans for output and product sales, and so forth). As a result, planning the efficiency of production at many industrial enterprises, especially those under union-republic and republic jurisdiction, does not meet modern requirements for stepping up intensification and increasing the efficiency of management. Even in the technical, industrial and financial plan, which is a developed program for production and economic activity of enterprises during the planning year and a means of disclosing production reserves, many of them essentially fail to fill in one of its leading sections -- "Indicators of increased economic efficiency of production."

Such enterprises have practically no clear-cut planning orientation in the area of increasing the economic efficiency of production. There are frequent cases in which the enterprises in their plans for increasing the efficiency of production only formally list individual, separate and uncoordinated measures that are directed toward improving technical equipment, technology, organization,

FOR OFFICIAL USE ONLY

administration and planning of production, but do not calculate the economic effect expected as a result of their implementation and do not determine the possible influence of these measures on the corresponding indicators of efficiency. As a result, indicators of efficiency of production, if they are calculated and planned at all, are included without the proper technical-economic factor-by-factor substantiation.

In this connection, on the initiative of the Central Committee of the Communist Party of Georgia, some one-time target investigations were conducted, which are of a certain amount of interest to other republics as well. These investigations made it possible in a comparatively short period of time to study comprehensively the various aspects of the economic activity of the enterprises of individual regions, to reveal existing shortcomings and to render them assistance in disclosing production reserves and improving the assortment and quality of products. As a result, in many intrarepublic regions of the Georgian SSR essential reserves were disclosed for additional product output, and this created a reliable basis for substantiating counterplans and commitments.

Systemic comprehensive analysis of intraproduction reserves of enterprises should be widely used in the economic practice of the regions. The materials and conclusions of the analysis can be used for drawing up regional and branch comprehensive programs for the utilization of internal reserves for increasing the efficiency of economic activity.

Comprehensive target programs (branch, interbranch, regional and so forth) for control of intraproduction reserves for improving the most important qualitative indicators of the economic activity can be utilized expediently for substantiating the planned quantities in the dynamics of qualitative indicators of growth and control over it in the corresponding regions.

Increasing the efficiency of the regional economy should be considered to be a continuous process that is related to ensuring the implementation of long-term tasks for the socioeconomic growth of intrarepublic regions. In this connection it seems necessary to develop long-term regional predictions, plans and comprehensive programs for the socioeconomic development of individual intrarepublic regions.

In the regional predictions and comprehensive programs one should also formulate the main basic strategic goals and the basic problems that ensue from them as well as concrete tasks for further socioeconomic and scientific-technical development of the regions, and suggestions of ways of solving the problems that have been raised, the rates, structure, proportions, efficiency and regional parameters for increasing the corresponding territorial units, labor, material and financial resources and the entire complex of measures that provide for the attainment of the strategic goals that have been set with reduced expenditures of public labor.

COPYRIGHT: Izdatel'stvo "Pravda", "Voprosy ekonomiki", 1980

11772
CSO: 1820

FOR OFFICIAL USE ONLY

REGIONAL DEVELOPMENT

UDC 338.911(471.50)

REPORT ON PROJECTED DEVELOPMENT OF URAL REGION

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 10, Oct 80 pp 3-14

/Article: "On the Scientific Report 'The Development of the Productive Forces of the Ural Economic Region for the Period up to 1990-2000'"

/Text/ The Urals are not simply a geographic concept. Historically the Urals have always been the forge of our country, the base of its industrial development. In the entire world there is no other such unique combination of natural resources, minerals, as the Urals are.

The Ural Economic Region is one of the largest territorial production complexes of the Soviet Union. It includes the economies of five oblasts: Sverdlovskaya, Chelyabinskaya, Permskaya, Kurganskaya and Orenburgskaya, and the Udmurtskaya ASSR.

While having only 3 percent of the territory of our country, the region concentrates a significant share of the all-union productive capital and produces a considerable portion of the industrial production of the USSR. In the territorial division of national labor the Urals have retained to this day their importance as the base of heavy industry, the role of whose sectors in the overall Ural industrial production is very great and exceeds the analogous indicator for the country as a whole.

Steel and rolled metal products, pipe and metallurgical equipment, forge and press machinery and electrical machinery, heavy freight cars, tractors and motorcycles, commercial asbestos, potassium fertilizers, products of the timber, wood processing and pulp and paper industry, various construction materials and so on are produced in the Urals; the Urals are also an important supplier of commodity grain, primarily durum wheat. Along with abundant natural resources and a mighty production system the availability of highly skilled personnel and a relatively great efficiency of social production, which is governed by all three factors, are characteristic traits of the region.

A large scientific and technical and planning and design potential is closely connected with the great economic potential in the Urals. Here more than 250 scientific research institutions, 50 higher educational institutions and 320 tekhnikums are at work, the Ural Scientific Center of the USSR Academy of Sciences is in operation. Scientists of the Urals have achieved significant results in the fields of mathematics and mechanics, solid state physics and chemistry, the theory of metallurgical processes, high temperature electrochemistry, plant and animal ecology, the geological sciences and economics. These works are promoting both the advance of basic science and the solution of practical regional problems.

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

The role of the Urals in the foreign economic ties of the country is also great, Urals residents are actively participating in scientific and technical cooperation with foreign states.

The particular importance of the region in the plan of the exchange of raw materials and industrial products, production cooperation in the marketing of products, the output and supply of special equipment results from the geographic location of the Urals at the meeting point of the European part of the USSR, which is industrially developed, but has comparatively limited raw material and energy resources, and the rapidly developing regions of its Asian part, which have enormous reserves of raw materials and energy.

All this determines the great potentials of the further development of the productive forces of the Urals in the long-term future.

Having conducted studies in this direction over a number of years, the Ural Scientific Center of the USSR Academy of Sciences, with the enlistment of many central and Ural scientific research institutions and higher educational institutions, prepared the scientific report "The Development of the Productive Forces of the Ural Economic Region for the Period up to 1990-2000," in which the foundations of the comprehensive program of a new boom of the economy of the Urals are laid. The main purpose of the report is the preparation of reference materials for the elaboration by USSR ministries and departments, the RSFSR Council of Ministers and RSFSR Gosplan of specific decisions on questions of the economic and social development of the Ural region. In the report the means of increasing production efficiency and the growth rate of labor productivity in the Urals and of increasing the contribution of the region to the economy of the country are specified, measures on the further increase of the standard of living of the population, the improvement of the working and living conditions of the people, the harmonious development of cities and population centers, environmental protection and so on are outlined.

In November of last year this report served as a prerequisite of the fruitful work of the All-Union Scientific Conference on Problems of the Development of the Productive Forces of the Urals (With Allowance Made for Adjacent Regions) in the Future, which was held in Sverdlovsk and drew up detailed recommendations, which concern the solution of a number of important complex socio-economic problems. The Institute of Economics of the Ural Scientific Center of the USSR Academy of Sciences made a significant contribution to the generalization of the report materials and to the substantiation of the proposals on the development of the economy and culture of the Urals.

Reporting at the meeting of the Presidium of the USSR Academy of Sciences on the work that had been done, Corresponding Member of the USSR Academy of Sciences M. A. Sergeyev, director of the Institute of Economics of the Ural Scientific Center, dwelled on three main themes: the place of the Ural Economic Region in the national economy of the country, the problems of increasing the efficiency of the economy of the region and several organizational questions of the intensification of its economy.

M. A. Sergeyev emphasized that apart from the exceptional scale of their industry and its great territorial concentration the Urals have important features which are determined by the qualitative composition of their products. Many types of the final product, which is put out in the Soviet Union, are produced in the Urals,

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

thus, their economy to a considerable extent determines the overall technical level of the country. The fact that the value being newly created here considerably exceeds the locally sold net production serves as an important characteristic of the economy of the region; the remainder goes for statewide needs, owing to which the Urals also hold an important place in the production and redistribution of the national income.

The special role of the Urals in the Soviet economy is also dictated by the fact that in essence all the latitudinal roads, which connect the European part of the country with the eastern part, pass through their territory. The Ural railroads, motor and river transport carry out an appreciable portion of the all-union freight traffic, and therefore the intensity of the operation of transport here is very high. In this connection both the construction of new roads and main bypasses of congested junctions and the rationalization of traffic are necessary.

Moving on to the problems of increasing the efficiency of social production, M. A. Sergeyev singled out the question of improving the use of nature in the Urals.

For centuries the Urals were famous for their abundant natural resources, but in recent years certain complications have formed in this sphere: some resources have begun to become scarce, industry has begun to operate on imported raw materials. Debates concerning whether this situation is objective or unobjective have arisen among specialists. The studies were lengthy and complex. Geologists, economists and representatives of other fields of knowledge took part in them. The conclusion they came to is: the situation is liable to planned regulation. The geological work in the traditional mining regions must be continued and the prospecting and exploration of potential deposits must be carried out to depths of 1,500-2,000 m, for everything that was on the surface has already been removed. It is necessary to go farther into the Ural North, where iron, copper, coal and bauxites have been discovered, into the Near Urals region and the Transurals. The placement into operation of already proven deposits must be expedited, questions of the construction of new mining and concentration combines must be solved more rapidly, the complete use of mineral raw materials and the maximum possible extraction from ores of the corresponding components must be organized.

There is every opportunity to reduce during the 11th Five-Year Plan and subsequently to completely eliminate the importing of iron ore to the Urals from far away, M. A. Sergeyev said. The copper content in the ores of the Urals is higher than in other regions, new copper mines are being built, in this (with an increase of capital investments) lies the guarantee that copper production in the Urals in the not so distant future will take place, mainly, by means of their own resources. Here it should be borne in mind that the expenditures on the mining of 1 ton of ore in the Urals are one-half to one-third as much as, say, in Siberia, Kazakhstan or Uzbekistan.

Not everything possible and necessary has yet been done in the Urals to provide industry and agriculture with their own fuel and power resources, particularly solid fuel. Coal reserves exist in the Urals, and their development, along with the use of gaseous fuel, should create the conditions for the development here of energy-consuming sectors of industry. M. A. Sergeyev noted that in the Ural North under the coal seams there are deposits of bauxites, from which it is possible to smelt aluminum locally.

FOR OFFICIAL USE ONLY

The imperfection of the use of nature in the Urals, in the speaker's opinion, is affecting the handling of such a gift of nature as timber. It is being felled wastefully, with neglect of the scientifically sound norms. If this continues, in 20 years the forests of the Urals will not be able to ensure a stable volume of logging. In order to maintain and increase the productivity of forests it is necessary to reduce the amount of logging in the forests of main use, offsetting the deficient amount of felling with the use of scrap wood, as well as by means of a number of other measures on improving forestry. It is necessary to enhance the public health and water conservation role of forests in the different natural economic regions of the Urals and in adjacent territories.

The problem of the rational use of water resources is no less urgent. Today the Urals consume about 35 km³ of water, of which 1 km³ is used in agriculture and 1 km³ is used in municipal services, while industry consumes nearly all the rest, primarily by means of industrial recirculation. Back during World War II hundreds of enterprises, which had been evacuated from the West, began operation here without treatment facilities. In recent years much work has been done on the construction of recirculating systems at enterprises and treatment plants, and now in the use of recirculated water the Ural Economic Region is ahead of the others. Chelyabinskaya Oblast, where there are fewer water resources, while water supply has been set up better than in several neighboring oblasts, especially stands out in this respect.

About 10 km³ of fresh water are consumed in the Urals, while the local average annual runoff is 102 km³. It is as if no complications should arise with water. But there is not enough of it. This is explained by the uneven distribution of water resources through the region and the lag in the development of water management. Hence the conclusion: to create a system of reservoirs and pipelines for the purpose of redistributing the water resources and to continue the work on waste treatment. The optimization of the water resource balance of the Ural Region should create the conditions for meeting its needs with allowance made for the protection of waters from pollution and depletion.

The lands in the Urals, as M. A. Sergeyev reported, are being used very intensively for obtaining foodstuffs, but far from within the range of the potentials. In the metallurgical section there are few plowlands and pastures, but the further intensification of their use can yield an appreciable increase of agricultural produce. The same thing applies to Sverdlovskaya and Permskaya oblasts, as well as Udmurtia, which belong to the Nonchernozem Zone, where the intensification of agriculture should proceed relatively more rapidly. Ural scientists have elaborated the main directions of the use of the land resources of the region for the future, have outlined measures on increasing the efficiency of agricultural production and have made recommendations on protecting man's natural environment.

M. A. Sergeyev assigned to the problems, which are connected with the increase of production efficiency and should be solved first of all, the comprehensive and more complete utilization of mineral raw material and other natural resources, the improvement of the sectorial structure of the economy on the basis of the thorough processing of local raw materials and the fundamental modernization of the industrial potential, the implementation of the correct investment policy, the anticipatory development of the production and social infrastructure, the increase of labor productivity, the reduction of manual labor, especially in the loading and unloading cycle, and the increase of the standard of living of the population.

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

As to providing Ural industry and agriculture with manpower resources, here, as the analysis shows, it is necessary to count only on their internal forces, the speaker declared.

In speaking about planning and the management of the economy, he emphasized that the economic efficiency of enterprises, which are based on mineral raw materials, can be increased significantly by improving the mechanism of the management of mining. The scale of consumption of minerals, the achieved technical level and the requirement of the intensification of the economy are giving rise to the need to reject the departmental approach in mining mineral resources. The main means of solving the problem consists in organizing intersectorial industrial organizations for the development of compound deposits. This question is of very great importance for the development of the productive forces of the Urals with their diverse, mainly compound, mineral resources.

In conclusion M. A. Sergeyev said that the study of the economic situation in the Urals and the elaboration of the prospects of the economic development of the region had a strong influence on the direction of the activity of the scientific research institutes, higher educational institutions and planning organizations of the Urals and had lent it greater purposefulness. The support of the Presidium of the USSR Academy of Sciences is of great importance in this matter. It would be impossible for the Ural Scientific Center to actively influence by its studies the increase of production efficiency without such directions as mechanics and machine building (a machine building department has now been created at the center), powder metallurgy, polymer chemistry, legal questions of economic construction, the history of the national economy of the Urals. The work on these and other problems will make it possible to increase the return of science in the interests of practical work, in the interests of all the people.

The July (1979) decree of the CPSU Central Committee and the USSR Council of Ministers on the improvement of planning and the perfection of the economic mechanism gave a strong impetus to this work--in conformity with this decree the Ural program should become a component of the unified statewide plan.

The scientific report on the development of the productive forces of the Ural Region attracted great attention of the members of the Presidium of the Academy of Sciences and all those present at the meeting, who were acquainted with it.

M. A. Sergeyev was asked many questions, which made more precise individual assumptions of the report.

A group of questions concerned the provision of the Urals with manpower resources. M. A. Sergeyev responded that the growth of manpower resources is slowing, but this problem will be able to be solved by the increase of productivity and the improvement of the working conditions at the enterprises, which are being newly constructed and renovated, by the rationalization of the use of manpower and its redistribution in accordance with the requirements of the development of the economy and by various social measures. A special matter is the enlistment of the population of cities in seasonal field work. It is in the state interests to place this type of assistance to agriculture on a reliable planning and contractual basis, which will make it possible to correctly calculate and utilize the manpower resources.

FOR OFFICIAL USE ONLY

To the question, should not a system of subsidiary farms attached to industrial enterprises be developed in the Urals for the better supply of the population with foodstuffs, the speaker noted that there is excellent experience in organizing and managing such farms, particularly at the Magnitogorsk Metallurgical Combine and the Saldinskiy Metallurgical Plant, experience which is now being disseminated, and this is the proper path.

The scientists, who participated in the discussion of the report, rated highly the work submitted for their examination and made their own suggestions and additions to it.

As Vice President of the USSR Academy of Sciences Academician A. V. Sidorenko said during the discussion, the Urals began to be developed since the times of Demidov on the basis of the enormous mineral and raw material resources, and this was the main thing which determined their importance for the country. As before, this situation is now being maintained. But in recent years in connection with the very rapid growth of industry, which consumes mineral raw materials, in the Urals a certain contradiction has formed between the level of the extraction and processing of raw materials and the state of the mineral raw material base; many enterprises have begun to experience acute difficulties in the supply with raw materials. Instead of solving the problem within all the Great Urals, our planning and economic organs have taken an easier route--the bringing in of ores from other, often very remote regions, for example, from the Kursk Magnetic Anomaly and the Kola peninsula. Meanwhile, and this is clearly shown in the report on the basis of the materials of geological surveys, the mineral wealth of the Urals has not been depleted. Large deposits of minerals, the mining of which has not yet been developed, but which it is economically profitable to work, are concentrated in different parts of them.

The same thing concerns the fuel and power resources. Instead of discussing, as up to now has been done at times, the possibilities of transferring power to the Urals from the Kansk-Achinsk basin, A. V. Sidorenko noted, it is much more useful to recall that reserves of natural gas, which are capable of meeting the needs of Ural industry for many years ahead, are located right nearby, in the western near Urals and the eastern Transurals. Hence it is clear that in the interests of the matter the questions of the development of the Urals must be solved with allowance made for the development of the regions adjacent to them--the economic regions of the Urals and Western Siberia are closely connected.

In the words of A. V. Sidorenko, the Nedra Program, which was compiled by the Ural Scientific Center, is just as important as the Sibir' Program, and therefore he suggested that USSR Gosplan examine the Ural program as it examined the one which was compiled by the Siberian Department of the USSR Academy of Sciences. Moreover, the question of the rationalization of economic contacts, as well as of the elimination of the departmental approach to the working of compound deposits, when many valuable components of the raw materials being extracted are discarded, should be discussed first of all. Any ministry, having acquired a deposit, should be responsible for the extraction and utilization of all its components, as, incidentally, is now done abroad, in other socialist countries.

Since the potentials of the Urals are still far from exhausted, A. V. Sidorenko believes, it is quite realistic to raise the question of developing in the northern Urals a new base of ferrous metallurgy, which would supply its products to the enterprises of the European part of the USSR and Western Siberia.

14

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

Academician N. V. Mel'nikov characterized the scientific report being discussed as a magnificent springboard, from which is it possible to conduct an offensive in various directions of scientific and practical activity and which makes it possible to select from the large number of problems of science and practical work the most vital ones.

The Ural mining industry, N. V. Mel'nikov said, has slowed the rate of its development owing to a misunderstanding, which was caused by incorrect ideas about the scale of the ore reserves of the region. The Ural Range as such is a layer of crystalline rocks, which crop out and are only lightly covered with Quaternary deposits. Whatever was easy to remove from this layer by the open-cut method and was easily available, has indeed already been removed to a considerable extent. This is in the main Urals. But its eastern and western parts, which are under a thicker sedimentary cover, are also rich in minerals. There it is necessary to drill, it is necessary to prospect, but the development of these operations is inadequate. On the eastern slope of the Northern Urals especially rich deposits should be found, precisely on the eastern slope, since the western slope has been exposed to enormous tectonic disturbances and there abundant finds should not be expected. It is quite natural in this connection that in the report an interest in deep horizons was stimulated.

The Urals were always famous for their open-cut mining, from here the equipment and technology of precisely such mining spread throughout the country. Now the lower horizons require special equipment and techniques of mining. And here, as N. V. Mel'nikov believes, not everything is completely clear. The Ural Scientific Center, which serves the mining Urals, cannot and does not have the right to live without a "mining" unit in the form of at least a laboratory or a department at the Institute of Geology and Geochemistry, which would conduct research in the area of the mining of minerals in deep horizons.

The further development of the productive forces of the Urals received rigorous scientific substantiation in the report, Academician N.N. Nekrasov said. Now the most fundamental materials should be selected from those prepared by the Ural Scientific Center for presentation in the form of a regional program to USSR Gosplan and the USSR Council of Ministers. These materials would be taken into account in the Main Directions of the Socioeconomic Development of the Country and in the 11th Five-Year Plan.

Secretary of the Sverdlovskaya Oblast Committee of the CPSU V. A. Zhitenev on behalf of the secretaries of the oblast party committees of the Ural Economic Region, who were present at the meeting, expressed gratitude to the Presidium of the USSR Academy of Sciences and to the scientists of the academy for the attention which they were devoting to the problems of the development of the economy of the Urals. The party, soviet and economic organs of the Urals, the central ministries and departments are constantly dealing with these questions, but, as a rule, this work of theirs is leading to the making of only separate, partial decisions. That is why the aspiration of the Ural Scientific Center to examine thoroughly and comprehensively a wide range of problems of the Urals and to make the appropriate recommendations is fundamentally important.

There should be considered, V. A. Zhitenev said, as a positive trait of the prepared report, for example, the fact that the place of the Ural Economic Region

FOR OFFICIAL USE ONLY

in the system of the social division of labor and economic contacts with adjacent territories is shown in it.

All the conclusions drawn in the report also have a direct bearing on Sverdlovskaya Oblast, of which a diversity of developed sectors of the economy, especially industrial sectors, is characteristic. V. A. Zhitenev cited some data which reflect the growth of industry in the oblast. Since the beginning of the Ninth Five-Year Plan the industrial production volume has increased here almost solely due to the increase of labor productivity. Machine building and metalworking, ferrous metallurgy, the chemical and petrochemical industry and the generation of electric power are developing at an anticipatory rate. At the same time a certain lag in a number of directions of economic activity has been noted in Sverdlovskaya Oblast. We are still very far, V. A. Zhitenev noted, from the skillful, practically assiduous use of natural resources, in which the departmental approach still triumphs, which is leading to serious difficulties in the solution of socio-economic problems. Therefore the conclusion contained in the report on the need to organize intersectorial associations for the complete development of natural resources must be supported.

The extreme slowness in replacing the obsolete and worn out equipment at a number of enterprises of ferrous metallurgy and heavy machine building was correctly indicated in the report. Renovation and retooling require a more in-depth approach than the one which is now being implemented. The need has come for the basic renovation in the Urals not only of individual enterprises, but also of their associations, entire industrial centers, zones, workers' cities and settlements.

V. A. Zhitenev reported that the amount of fixed production capital in terms of 100 hectares of agricultural lands in the Urals is 20 percent less than the average indicators for the RSFSR, while the productivity of agricultural labor is 10 percent higher. It is necessary to expedite the industrialization of agricultural production and to achieve a high rate of its conversion to an industrial basis.

V. A. Zhitenev expressed the hope that with the support of the Presidium of the USSR Academy of Sciences the main theses of the report and the suggestions, which were made by the participants in this meeting, just as the recommendations of the All-Union Scientific Conference on Problems of the Development of the Productive Forces of the Urals in the Future, which was held in Sverdlovsk, would serve as the basic materials for the elaboration by ministries and departments of decisions concerning the long-range development of the economy of the Urals. The oblast committees of the party will actively promote the implementation of the outlined plans.

A. S. Poplaukhin (Ural Scientific Research and Planning Institute of the Copper Industry) spoke about the fact that the research of the Institute of Economics of the Ural Scientific Center in recent years has been of great practical interest for applied science and planning organizations. This research is helping to find better, as optimal as possible solutions of specific problems of the development of industry with allowance made for not only general, national economic factors, but also regional factors.

A. S. Poplaukhin dwelt on the situation with the construction of new mining enterprises. Reserves of unique ores, he said, first of all copper ores, which in the value of the metal contained in them are superior to the ores from other regions, have been proven in the Urals. Consequently, the construction of new mines in the

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

Urals is a task of primary importance. The program of such construction has been determined, but its rate is inadequate due to the poor resources of construction organizations, which is connected not least of all with their shortage of workmen. The question arises: is it necessary to build in the Urals, say, a motor vehicle or radio plant, since they can also be built in any other region, and is it not better to concentrate the available resources in the construction of those enterprises which are possible only here, for example, mining and metallurgical enterprises? This is a theme for a serious economic analysis.

A. S. Poplaukhin also spoke about the need to develop an advanced processing method in ferrous and nonferrous metallurgy. The time has come for the organization of scale studies for the purpose of finding new technological processes, developing a high temperature processing method, perhaps on the basis of plasma and nuclear processes, which would make it possible to extract from the ore all the metals available in it and to improve environmental protection.

A. B. Kurzhanskiy (Institute of Mathematics and Mechanics of the Ural Scientific Center) in his statement emphasized that a considered program of the economic development of the Urals, which has been thought out in all aspects, requires a good information and computer base, which is connected with the need to process large information files, with the "playing out" of different versions in the area of the distribution of resources, planning, long-range and current, and so on. It is impossible, of course, to separate all this from the development of new computer hardware, new principles of management and the automation of scientific research. Much work, the coordination of the efforts of institutes of different specializations (mathematics and mechanics, economics, ecology, geophysics and so on) are necessary. Some work is being done in this direction. The departments of mathematics, mechanics and control processes, the Council for the Automation of Scientific Research and the Coordinating Committee for Computer Hardware of the USSR Academy of Sciences are giving the Ural mathematicians support. But all this is taking place not without serious difficulties. A powerful modern computer center, which conforms to the serious problems which face Ural science, must be set up.

Academician A. N. Yefimov dwelt on general scientific and methodological questions which ensue from the report which was heard.

The main directions of the work we are discussing today, he said, were specified 30 years ago in the economic unit, which was set up at the Ural Branch of the USSR Academy of Sciences. At that time the first attempts were made to identify the most significant and specific economic and social problems, which should be solved on the scale of the region. The comprehensive processing of ores, particularly of the Kachkanar deposit, was one of these problems. At that time it seemed absurd, senseless to speak about the working of deposits of iron ore, in which there was only 16 percent metal, but the first estimates made at the Ural Branch showed the feasibility of using Kachkanar ores and their compliance with the economic requirements in the area of the complete utilization of mineral raw materials. This is what concerns the raw material base. If we speak about the formation of the structure of Ural machine building, the conclusion was drawn that it should reflect the structure of Ural industry as a whole, that is, have the capacities for the renewal of the machinery pool, the further expansion and increase of production.

Here misgivings were heard, A. N. Yefimov said, to the effect that the extractive sectors of industry in the Urals ostensibly were lagging in their

FOR OFFICIAL USE ONLY

development as compared with the processing sectors. The proportion of raw material sectors is indeed decreasing, but this does not at all attest to their extinction. We are witnesses to a progressive process, which consists in the fact that owing to more and more improved technology it is possible to obtain from a smaller amount of raw materials more and more products. This progressive direction was reflected in the report.

Having approved of the report, A. N. Yefimov emphasized that its special importance consists in the fact that it outlines ways for combining the principles of territorial and sectorial planning--planning organs should rely on works of this type.

Given the present situation with the study of the mineral resources of the Urals, when only their upper level has been studied well, the role of geophysical methods of prospecting and exploring for minerals is increasing substantially--such was the main idea of the speech of B. P. D'yakonov (Institute of Geophysics of the Ural Scientific Center). Geophysical methods hold a conspicuous place in the exploration for minerals in the Urals. The Institute of Geophysics has developed a number of new methods and has created the equipment, for example, for the induction electromagnetic exploration of copper pyrite deposits. The new methods make it possible to determine certain components of a seam content without core analysis. The high-quality equipment developed at the institute for determining the magnetic properties of rock was tested at the Kol'sk Superdeep Well and at offshore deep wells, which were drilled during the 68th and 69th voyages of the research vessel "Glomar Challenger" in the region of the equator. And still, if we think about the prospects, what has been done is not enough.

Remote aerospace methods are of great importance for identifying new ore concentration structures in the Urals. They are helping to compile forecast maps of those zones where it is advisable to search for mineral deposits. The use of space photography should be combined with contact methods. In 1978 within the Intercosmos program an experiment of this type was carried out by the Institute of Geophysics jointly with the Institute of Space Research of the USSR Academy of Sciences. The use of magnetohydrodynamic generators is also affording great opportunities for the identification of hidden fractures in the crust and for the study of the block structure of the Urals, which extends for more than 2,000 km.

Corresponding Member of the USSR Academy of Sciences G. V. Voropayev devoted his speech to the theme of the rational use of water resources and to the water management of the Urals. He said that the studies of the interaction of surface and ground waters and the operations on the water balance of the territory and on the study of the formation of water flows were still poorly organized here. From the data cited by him it follows that in the Urals in the near future the demand of industry for water will increase 1.5-fold and of agriculture--3-fold, the consumption of water for municipal and household needs will double. Where is the water necessary for this to be gotten? There are several ways to solve this problem. The first is to utilize better the local water resources with their utmost purification, the changeover to closed water supply cycles, the regulation of the runoff of rivers and the redistribution of the water reserves available in the region. The second way is the transfer of water resources from other regions, if only Western Siberia. Both ways will entail expenditures of billions of rubles. Which of them is to be preferred?

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

The transfer of waters is a very effective step, but it will not make it possible to improve the quality of the water sources existing in the Urals--lakes and rivers. The changeover to a closed technological cycle seems more reasonable. Advanced foreign know-how also speaks in favor of this suggestion.

Sweden is very close to the Urals with respect to the degree of development of industry and the structure of water consumption. Legislative acts, in accordance with which all discharges of sewage were virtually prohibited, were passed in Sweden back around 1968. This led to some rearrangement of industry. This rearrangement initially followed the line of the building of treatment facilities on intraplant grounds and closed water supply cycles, and then the very processing method of many works began to be changed and improved with allowance made for the new conditions of water supply--in a number of instances it was eliminated entirely from the technological cycle. As a result the total demands for water in Sweden by 1980 had been reduced to one-third to two-fifths as compared with the amounts which would have been necessary if the processing method had not been changed. All this has caused a sharp improvement of the quality of the water in the lakes and rivers and has improved the entire natural environment.

Measures of this type are also being implemented in the Urals. The discharge-free system at the Verkh-Issetskiy Metallurgical Plant is yielding a good economic and ecological impact. The cost of the water, which is used over and over again in the technological circulation, is less than if it had been drawn from some specially built reservoirs. The fact that fishermen have appeared on the shores of the Sverdlovsk city pond, which is located downstream from the plant on the Iset' River, attests to the quality of the water.

Closed technological cycles and waterless technology are one of the strategic directions of the development of industry in the Urals, and the corresponding block of research work should be represented in the unified comprehensive goal program on the protection of water resources and the reliable water supply of all the sectors of the national economy of the Urals.

It is quite clear that the problem of the development of the productive forces of the Urals cannot be solved only within this region; in essence it is an all-union program, Academician V. M. Tuchkevich believes. He devoted his speech mainly to one specific question, which is connected with the fuel and power complex. He supported the statement of A. V. Sidorenko, who expressed the opinion that it is unsuitable to supply the Urals with power from remote regions. It is economically more feasible to utilize local lignite. Therefore, efforts should be concentrated on further geological prospecting of the Ural North and the delivery of fuel and power resources to the Urals from nearby regions should be planned.

Academician S. V. Vonsovskiy, chairman of the Presidium of the Ural Scientific Center of the USSR Academy of Sciences, said that the report presented for discussion was one of the most important works of the scientists of the Urals. He thanked the Presidium of the Academy of Sciences and its institutions for giving assistance in this matter, as well as noted the great support, which was received during this work from the party and soviet organizations of the Ural oblasts, from a number of institutions of USSR Gosplan and RSFSR Gosplan. The Ural Scientific Center of the USSR Academy of Sciences has directed and in the future will direct its efforts at studying the urgent problems of increasing the efficiency of the economy of the Urals.

FOR OFFICIAL USE ONLY

The comprehensive development of the major economic regions of the country has now become a vital necessity, Vice President of the USSR Academy of Sciences Academician P. N. Fedoseyev stated. The planning of the development of the national economy as a whole should inevitably be backed by the analysis of the situation in these regions and by forecasting for the future. The Presidium of the USSR Academy of Sciences has already examined such materials for Siberia, today it is examining the ones for the Urals, the Far Eastern Scientific Center has also prepared the corresponding report. If we speak about this report, P. N. Fedoseyev said, its evaluation is unequivocal: impressive, detailed work has been done, which can be sent to planning and economic organs for practical study.

The decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 is directing scientists toward the elaboration of the problems of managing the national economy under present conditions, P. N. Fedoseyev continued. One of the most complicated questions is the combination of territorial and sectorial planning and management, particularly the management of large territorial production complexes. Both lawyers and economists--this is also evident from the report being discussed--are making suggestions on the creation of intersectorial industrial associations. There is some need for the Department of Economics and the Institute of State and Law of the USSR Academy of Sciences along with regional scientific centers to make these suggestions more specific. Thus, effective assistance will be given to the corresponding commissions which are dealing with the problems of management.

The comprehensive development of the regions, particularly the Ural region, requires, as P. N. Fedoseyev assumes, special attention to the retooling and renovation of industry. Great variety in technical equipment is characteristic of Ural enterprises. Such variety can appear even within a single enterprise. Take, for example, the Verkh-Issetskiy Metallurgical Plant. Part of it has remained unchanged, it seems, since the times of Peter, another part of it is modern, very well equipped, the air there is also completely different. Our comrades from the Urals must additionally analyze from the economic and technical points of view the state of affairs with the retooling and renovation of industry and draw a valid conclusion.

Summarizing the discussion of the scientific report on the development of the productive forces of the Urals, President of the USSR Academy of Sciences Academician A. P. Aleksandrov singled out the question of interdepartmental economic associations. He recommended that the Institute of State and Law jointly with economists examine the statutes on scientific production and production associations as applied to the departmental structure of the economy for the purpose of furnishing the creation of interdepartmental associations with a legal basis, as well as expressed the opinion of the usefulness, if only on an experimental basis, of organizing such associations in the Urals.

A. P. Aleksandrov thanked the compilers of the report for the important interesting work.

The Presidium of the USSR Academy of Sciences resolved to consider as one of the most important tasks of the Ural Scientific Center of the USSR Academy of Sciences the further study of the scientific problems, which are conducive to the accelerated development of the productive forces of the Urals, the improvement of the economic mechanism, the increase of the efficiency of social production, the rational

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

combination of the sectorial and territorial aspects of planning; to increase the coordination of the research being conducted by academic and sectorial institutes and higher educational institutions, which are located on the territory of the Urals.

The scientific report "The Development of the Productive Forces of the Ural Economic Region for the Period up to 1990-2000," which was drawn up by the Ural Scientific Center of the USSR Academy of Sciences, was basically approved. It was proposed to submit the report to the USSR Council of Ministers and USSR Gosplan, so as to use it in the USSR ministries and departments and the RSFSR Council of Ministers when preparing the plans of the economic and social development of the USSR and the RSFSR for the 11th and 12th Five-Year Plans.

It was recommended that the Scientific Council for Problems of Scientific, Technical and Socio-Economic Forecasting and the USSR State Committee for Science and Technology use in work the main theses of the scientific report of the Ural Scientific Center and the suggestions of the All-Union Scientific Conference "Problems of the Development of the Productive Forces of the Urals in the Future up to 1990-2000."

The main directions of the research, which the Ural Scientific Center should continue, are indicated in the decree of the Presidium of the USSR Academy of Sciences. The Ural Scientific Center of the USSR Academy of Sciences and its institutes have been charged along with central and local scientific research and planning and technological institutes, higher educational institutions, economic and planning organs to expedite the implementation of the comprehensive scientific research programs on the rational development and use of resources (Nedra Urala), the processing and complete utilization of metallurgical raw materials (Chernaya metallurgiya Urala), the rational use and protection of biological resources (Ural--Biosfera), the complete and efficient use and protection of water resources (Vody Urala), as well as on the problems of the building of a continuous casting and rolling complex for obtaining cold rolled steel directly from molten metal (Kompleksnyye problemy mashinostroyeniya) and on the study of the physical and chemical properties of the surface of a solid (Poverkhnost'); to organize in 1980 within the Institute of Geology and Geochemistry imeni Academician A. N. Zavaritskiy of the Ural Scientific Center of the USSR Academy of Sciences a complex sector of the problems of mining sciences and the rational use of mineral resources.

COPYRIGHT: Izdatel'stvo "Nauka", "Vestnik Akademii nauk SSSR", 1980

7807
CSO: 1820

FOR OFFICIAL USE ONLY

REGIONAL DEVELOPMENT

UDC 001.89:(571)

MARCHUK ELABORATES ON DEVELOPMENT OF PRODUCTIVE FORCES OF SIBERIA

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 10, Oct 80 pp 36-41

/Article by Deputy Chairman of the USSR Council of Ministers and Chairman of the USSR State Committee for Science and Technology Academician G. I. Marchuk: "Problems of the Development of the Productive Forces of Siberia"

/Text An all-union conference on the development of the productive forces of Siberia, which was organized by the USSR Academy of Sciences, was held in Novosibirsk from 10 to 13 June 1980.

The conference program covered the most important economic and social problems of the development of Siberia, intersectorial, sectorial and regional problems of the study and comprehensive development of its natural resources, the development of the fuel and power complex, industry, construction, agriculture, transportation and the scientific and educational potential, questions of ecology and environmental protection, the medical and sanitary problems of the region.

Secretary of the CPSU Central Committee M. V. Simyanin and President of the USSR Academy of Sciences Academician A. P. Aleksandrov, who delivered reports, took part in the work of the conference. The first secretaries of the oblast committees and kray committees of the CPSU, ministers and responsible officials of the staff of the CPSU Central Committee, the USSR Council of Ministers and the RSFSR Council of Ministers, the USSR State Committee for Science and Technology and other departments attended the conference. Scientists of the USSR Academy of Sciences, the All-Union Academy of Agricultural Sciences imeni V. I. Lenin, the USSR Academy of Medical Sciences and sectorial scientific research institutes, instructors of higher educational institutions and workers of industry and other sectors of the national economy--the representatives of Siberia and other regions of the country, union and autonomous republics--took part in the meetings.

The discussion of the scientific research program "The Comprehensive Development of the Natural Resources of Siberia," which was compiled by scientists of the Siberian Department of the USSR Academy of Sciences, was one of the main themes of the plenary and

FOR OFFICIAL USE ONLY

intersectional reports, as well as of the reports and statements in the 18 sections of the conference.

The elaboration of a unified program of such a scale, which integrally links basic and applied research in the most diverse fields of science, experimental design developments, work on the implementation and coordination with the plans of the economic development of the region, is an important stage in the development and adoption of the program-goal approach to the planning and management of scientific research.

Deputy Chairman of the USSR Council of Ministers, Chairman of the USSR State Committee for Science and Technology and Chairman of the Conference Organizing Committee Academician G. I. Marchuk, who delivered the opening address, characterized thoroughly the complex set of problems of the development of the productive forces of Siberia and the contribution which Soviet scientists are called upon to make to the solution of these problems.

"In solving the urgent problems, which face the national economy, especially on the threshold of the next five-year plan, the party is counting on effective assistance on the part of our scientists," Comrade L. I. Brezhnev noted at the November (1979) CPSU Central Committee Plenum. This fully pertains to the solution of such a most important national problem as the accelerated development of the productive forces of Siberia.

All the prerequisites--considerable natural resources, a significant industrial potential, a powerful scientific base--exist for the accelerated development of Siberia. The territory of Siberia is nearly half the territory of the country. Approximately three-fourths of all the mineral, fuel and power resources, more than half of the water power resources, a considerable portion of the ores of nonferrous metals, about half of the reserves of commercial lumber, a fifth of the land fund which is suitable for practicing agriculture are concentrated here. This is enormous wealth, a springboard for the vigorous development of the economy of the country. Therefore the enormous importance of Siberia for the future of our state is understandable.

The scientists of the Siberian Department of the USSR Academy of Sciences, in defining concretely the proposition of the 25th CPSU Congress on the anticipatory rate of development of Siberia, have shown that for the optimum development of the economy of the entire country the rate of development of Siberia should exceed by approximately a third the all-union rate.

And in the past 10 years Siberia has indeed developed more rapidly than the country as a whole. This lead is connected first of all with the formation of the Western Siberian Petroleum and Gas Complex and with the accelerated development of the Angara-Yenisey Region.

The building in Siberia of the largest fuel and power base of the country has been the most significant event of the past decade. During this period petroleum production increased here by 10-fold, while the production of natural gas increased by more than 17-fold.

FOR OFFICIAL USE ONLY

Now the Western Siberian Petroleum and Gas Complex has entered a new stage--the stage of the heavy refining of petroleum and gas directly in Siberia. Along with the development of the Omsk and Angarsk petrochemical combines the first facilities of the very large combines in Tomsk and Tobol'sk and of the petroleum refinery in Achinsk will be put into operation in the near future.

At the same time the efforts on increasing the role of coal in the fuel and power balance of the country are being increased. In recent years the reserves of the Kuzbass have been reevaluated, the prospect of its transformation into a mighty base of high quality coking coals has been substantiated. Large-scale operations are being developed on the development of the Kansk-Achinsk lignite basin and the construction here of very large thermal electric power stations.

In the past decade the formation of the Bratsk-Ust'-Ilimsk Territorial Production Complex was basically completed and the building of the Sayansk Territorial Production Complex was begun. Four industrial giants: the Sayanskaya GES, the Sayansk Aluminum Plant, the largest in the country, the Abakan Car Building Complex and the Minusinsk Electrical Equipment Complex, determine the character of this complex of heavy industry.

The Noril'sk Mining and Metallurgical Combine has undergone great development, especially in connection with the discovery of new deposits. Last summer two expeditions of the Siberian Department of the USSR Academy of Sciences visited Noril'sk. After discussing locally the problems of the development of the combine, we came to the conclusion that in the future it should be a question of forming around the Noril'sk Industrial Center on the basis of the natural resources of Taymyr the new Northern Yenisey Territorial Production Complex. Recently a decision was made on preparing for the drafting of the appropriate program.

The 10th Five-Year Plan has been marked by the start of a new very important program of the development of the eastern regions of the country--the construction of the Baykal-Amur Main Line and the economic development of its zone. Already 1,700 km of the railroad bed have been built, including the so-called Small Baykal-Amur Main Line (Tynda-Neryungri). The firstling of the economic development of the zone of the Baykal-Amur Main Line--the Neryungi Open Coal Pit in Southern Yakutia--has been put into operation.

In connection with the construction of the Baykal-Amur Main Line the northern regions of Irkutskaya Oblast, Transbaykal and the Far East are undergoing particular development. The Upper Lena Territorial Production Complex, which at first was oriented primarily toward logging and the processing of timber, now will include the extraction of potassium salts and the production of potassium fertilizers, while in the future it will include the petroleum and gas industry and nonferrous metallurgy.

The Northern Baykal Territorial Production Complex will become a region of the mining and processing of valuable mineral resources, the Kholodnenskiy deposit of lead-zinc ores will be worked, the largest mining and concentration combine of the country--the Udokanskiy--is being planned in the northern part of Chitinskaya Oblast.

Even this cursory survey can give an idea of the great reserve for further development, which has been created in Siberia. What on the whole will be the strategy of development of Siberia in the immediate foreseeable future?

FOR OFFICIAL USE ONLY

The main unit of this strategy is the increase of the capacities of the fuel and power complex and power-consuming works. In 1980 a significant event will occur--Siberia will exceed the European part of the country and the Urals, taken together, in the amount of fuel production. Moreover, about 600 million tons of conventional fuel is going from Siberia to the European part and the Urals.

In the future along with the increase of these deliveries the main emphasis should be placed on the concentration in Siberia of power-consuming and electricity-consuming works. This requirement is dictated by the interests of the national economy as a whole, for the main advantage of Siberian fuel is its inexpensiveness, but when transported over 2,000-3,000 km this advantage is largely lost, and the national economy incurs great losses. Moreover, the resources of the transportation systems are not unlimited. In this respect much has already been done--it is widely known what development the complexes of ferrous metallurgy and the aluminum industry have undergone in Siberia.

The stimulation in Siberia of the petrochemical and chemical industries, which require much energy and heat, is a new trend; this is a great step forward. Now the matter depends on the further development in Siberia of electrometallurgy and electricity-consuming chemistry. The pulp industry is getting stronger and stronger--suffice it to mention the Bratsk Timber Industry Complex with the largest output of pulp in the world, the Ust'-Ilimsk Pulp Plant, which is being built with the participation of CEMA member countries. We are awaiting the further increase of the capacities for the thorough comprehensive use of timber--Krasnoyarskiy Kray, where the construction of efficient enterprises, which operate on the scrap of Angara timber associations, especially needs this.

A great economic potential has been built up in Siberia. The fixed production capital alone comes to more than 120 billion rubles. At the same time some of this capital no longer conforms to the new, rapidly developing processing methods, therefore an efficient program of the renovation of Siberian enterprises and the appropriate investments are necessary. The priority supply of the latest equipment, which is tailored for the local mining geological, natural and climatic conditions, is also necessary for the accelerated development of the economy of Siberia in the interests of the entire country. Let us recall the words of V. I. Lenin: "The mineral resources of Siberia are quite immense.... They are under those conditions, where equipment with the best machinery is required."¹

Siberia needs a regional scientific and technical policy, and not the copying of solutions which are suitable for other regions. A high concentration of production and higher unit capacities of equipment--for thermal electric power stations, for the open coal cuts of the Kansk-Achinsk Fuel and Power Complex and for the laying of gas pipelines--are advantageous here. Fundamentally new processing methods for the complete processing of multicomponent polymetallic ores and completely new types of raw materials are needed in Siberia. Scientific and technical progress should become the basis of a labor-saving technical policy in Siberia, a means of increasing the efficiency of all the sectors of the national economy.

Machine building is the key item in our times. For Siberia it is necessary to build sets of machinery and equipment, which are oriented toward the thorough

1. V. I. Lenin, "Poln. sobr. soch." /Complete Works/, Vol 42, p 113.

FOR OFFICIAL USE ONLY

and complete processing of natural resources and to build here machine building enterprises of Siberian specialization. The problem of equipment of northern design remains pressing.

The assets being invested in the production infrastructure, that is, in the construction of roads and electric power transmission lines, at times seem like a load on the main production investments, like something secondary, precisely on which it is possible to economize. But our historical experience has confirmed many times that when developing new territories the transportation system should be the lead element. The party and the government attach great importance to this. The construction of the Baykal-Amur Main Line and the Tyumen'-Tobol'sk-Surgut-Nizhnevartovsk railroad with a spur to Urengoy is a vivid example of such a strategic approach to the development of the eastern part of the country.

Now it is necessary to concentrate the main efforts in improving the transportation system on the development of the roads of the latitudinal direction, for the closer connection of the economy of Siberia with the Urals and the European part. In the long-range future the question arises of building a unified Northern Siberian Railway, of which the Baykal-Amur Main Line will become the eastern section, and of constructing a new outlet to the petroleum and gas regions of the northern part of Tyumenskaya Oblast.

The question of the year-round use of the Northern Sea Route is being worked on.

I would especially like to speak about construction. None of our plans and projects, not matter how excellent, will be put into practice, if they are not based on a powerful construction industry. The leading forces of the development of Siberia are, of course, the construction workers. The formation of the detachment of 100,000 construction workers of the Baykal-Amur Main Line, the collective of 70,000 of Bratskgesstroy, the enormous detachments of the Main Administration for Construction in Krasnoyarsk and the construction workers of Tyumen'--all these are examples of the farsighted state policy.

At the same time, as is known, in many regions of Siberia the allocated resources are not being assimilated due to the weakness of the construction base. Therefore, the large-scale plans of the development of Siberia should be backed by the anticipatory development of the construction materials industrial and the entire construction industry.

No matter how important equipment and technology are, still the main productive force of society is man. Social factors are assuming greater and greater importance in the economic development of the country and in the increase of the efficiency of social production.

The negative balance of migration of the Siberian population has always worried us--until recent years more people left Siberia than came to it. The government took special steps--the regional wage coefficients and the northern benefits were increased or introduced, housing construction was stepped up. In 1975 the turning point came--since that time we have had a positive balance of migration.

Of course, this is only the first step. The migratory mobility of the Siberian population is still high, the turnover of personnel here is 1.5-fold greater than

FOR OFFICIAL USE ONLY

in the central regions of the country. Our task is to consolidate the positive shifts, but for this in Siberia it is necessary first of all to increase the housing and sociocultural construction and to back the growing needs of the population more completely with foodstuffs and industrial goods. The improvement of health care and the medical service of the workers of Siberia is playing a significant role in the attachment of personnel.

The development of agriculture and the entire agro-industrial complex of Siberia requires special attention. Western Siberia and the northern part of Kazakhstan, which can make a significant contribution to the solution of the task set by Comrade L. I. Brezhnev--to meet more completely the demands of the Siberian population for meat, milk and vegetables by the production of these products locally--following the Nonchernozem Zone are by right called the next agricultural zone, which is playing an ever increasing role. There are still many untapped potentials here.

Chemicalization should become the main lever of the increase of the productivity of grain farming in Siberia. So far the fields are receiving fertilizers in small amounts. Previously the lack on the territory of Siberia of its own agricultural ores was an obstacle, while their transportation is too expensive. Now owing to the work of geologists both phosphorus and potassium ores have been found here. As to nitrogen fertilizers, natural gas has already made Siberia a major producer of them.

Land reclamation is very important for Siberia. The best lands for agriculture, for example, the Kulunda and Barabinsk steppes, constantly suffer from drought, while Siberia in the availability of water resources holds first place in the country.

The formation of a developed agro-industrial complex of Siberia basically includes the development and expansion of the microbiological industry, the production of balanced fodders and protein, the saturation of rural regions with the necessary storehouses and enterprises for the processing of agricultural raw materials. Much has to be done by the joint efforts of the Academy of Sciences and the All-Union Academy of Agricultural Sciences imeni V. I. Lenin on the breeding of new strains, the increase of the yield of plants and the productivity of animals.

Problems of ecology and environmental protection are acquiring greater and greater social significance. In using the diverse wealth of Siberia and building here mighty industrial complexes and cities, we should fully take into account the peculiarities of the natural environment of Siberia. Such a situation must be achieved so that serious ecological substantiation would precede all major projects.

The rate and scale of the development of the productive forces of Siberia depend on the number and quality of the specialists who will put their labor into this. Therefore the questions of training personnel for production and science also merit the most serious examination.

The effective, balanced development of the national economy of Siberia is possible only on the condition of the anticipatory scientific preparation of the development of new territories or complexes. By scientific preparation we understand all the research, geological prospecting, exploratory, planning and design and pilot industrial operations connected with the prospects of increasing the resource and economic potential of Siberia.

FOR OFFICIAL USE ONLY

The decree of the CPSU Central Committee on the activity of the Siberian Department of the USSR Academy of Sciences (1977) and the recommendations of Comrade L. I. Brezhnev, which were made during his trip through the regions of Siberia and the Far East (1978), were a mighty stimulus for intensifying the scientific study of the multilevel problems of developing the natural resources of Siberia.

In 1977-1978 in all the oblast and kray centers of Siberia and in the Yakutskaya and Buryatskaya ASSR's expanded meetings of the party and economic aktiv were held, at which the most urgent problems of the development of each region were examined and formulated by the local party and soviet organs and the scientific and technical community. The executives of the krays and oblasts, industrial and agricultural associations and geological administrations, scientists of the Siberian departments of the USSR Academy of Sciences, the All-Union Academy of Agricultural Sciences imeni V. I. Lenin and the Academy of Medical Sciences, sectorial scientific research institutes and higher educational institutions took part in this work.

The statement of these problems and the orientation toward them of the entire Siberian scientific and technical potential led to the formulation of long-term research programs--regional, sectorial and intersectorial, the goal of which is to give fundamental scientific substantiation to the methods of the comprehensive and effective development of the natural resources of Western and Eastern Siberia. The great importance and role of science will also be manifested in this.

So far more than 30 scientific programs have been formulated. They cover the key problems of the use of the mineral, land, timber and water resources of the eastern region, the problems of the development of the largest national economic complexes--the Western Siberian Petroleum and Gas Complex, the Kuzbass, the Kansk-Achinsk Fuel and Power Complex, Krasnoyarskiy Kray, the zone of the Baykal-Amur Main Line, Lake Baykal, the territorial production complexes of the Angara-Yenisey and other regions, and other complicated problems.

All these programs have been brought together in the unified program "The Comprehensive Development of the Natural Resources of Siberia," or the Sibir' Program.

The elaboration of a long-range program on the problem of the comprehensive development of the natural resources of Siberia is an important step in implementing the strategic policy--the changeover to the program-goal principle of the organization of the planning and financing of scientific research and its use in the national economy. There is no doubt that the Sibir' Program should be a component of the Comprehensive Program of Scientific and Technical Progress of the Country and become the real basis for the drafting of long-range plans of economic development. The raising of the Sibir' Program to the statewide level is the most important task of the Siberian Department of the USSR Academy of Sciences for the immediate future.

So far the main directions of the development of Siberia for the future have already been outlined in adequate detail. They have also been presented in the main scientific report, which was prepared for this conference. This report synthesized the points of view of USSR Gosplan, the Academy of Sciences, the USSR State Committee for Science and Technology, ministries and departments, the oblasts and krays of Siberia. Today, on the eve of the 26th CPSU Congress, the elaboration of detailed scientific recommendations on the means of further developing Siberia is of particular importance.

COPYRIGHT: Izdatel'stvo "Nauka", "Vestnik Akademii nauk SSSR", 1980

7807
CSO: 1820

END

28

FOR OFFICIAL USE ONLY